



## Next Club Meeting Sunday 8<sup>th</sup> September Belviour Guides Hall 6 Silva Drive West Wodonga

Meetings commence with a BBQ (with a donation tin for meat) at 12pm with meeting afterwards  
Members are encouraged to turn up a little earlier for clubroom maintenance  
Call in Via VK3RWO, 146.975, 123 Hz tone



Mick VK3CH 24GHz ATV setup, attempting some microwave TV DX

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# 24GHz Television DX Tests ~ Mick VK3CH

After moving house another project was to finally get around to playing with my microwave television transmitters. Both 10GHz and 24GHz dishes are available. I had only tested out the 24GHz dish on ATV over a few hundred meters years ago. 24GHz is a challenge, apparently, due to atmospheric water vapour to get long distances. As transmission frequency increases, atmospheric path losses become greater, particularly at frequencies above 10 GHz. When I have asked other hams what sort of distances expected the answers vary, no surprise I suppose.

So the only way is to experiment.

Television being wideband is most likely going to get less distance than narrow band voice and all the other modes such as SSB or digital modes.

I decided to start small and work my way up.

## FIRST TEST OVER 2km – Doncaster East to Doncaster Shoppingtown

A friends place has a nice view of Doncaster Shoppingtown so I set up my dish transmitter unit and a camera on mains power, pointing out their second storey lounge window, to the roof top carpark about 2.1km away.

Arriving at Doncaster Shoppingtown I chose the roof top carpark facing the direction of their house, but I could not see it, just a sea of houses and trees so aiming my RX dish was a general guess.

Hoping that security were not going to close me down, I set the dish up on its stand, but the carpark had a big wall to stop cars going over the edge, so I had to hold the dish in my hands and aim all while looking down at my small 12 volt TV on the ground.

After a minute a picture quickly appeared then gone, I had to sweep very slowly, but once again the picture appeared in colour and perfect resolution. The 24GHz dish system is analogue PAL mode.

As my hands were busy holding the dish, no photos of that achievement were taken.

Google Earth put the distance path at 2.14km

View to Doncaster Shoppingtown from the house at Doncaster East



Doncaster Shoppingtown Carpark, the house I am aiming for is 2km away, in there somewhere, time for microwave dish DF practice







Elevation path from the test house to Doncaster Shoppingtown carpark

At a distance of 2.14km the amount of sweep to keep a picture was about 3 degrees either side of the exact path, so at longer distances the sighting was going to be really spot on.

At least with a wideband TV signal of 7MHz no real need for GPS frequency locking is necessary, one less piece of 'kit' and expense.

As the drive over 2km does not take long, I left the 24GHz TX side on and unattended.

This won't be possible over a longer distance.

It was time to attempt a longer distance and I thought a place with mains power would be nice.

After talking to Peter Cossins, VK3BFG, he suggested he could go to the Sky High Mount Dandenong.

This is a restaurant and observation deck that overlooks greater Melbourne, 34.3km from Melbourne CBD.



View from Sky High Mount Dandenong observation deck, 620 meters above sea level  
The city buildings of Melbourne CBD 34km in the distance

My QTH is on the lower part of the road so another place with a clear view of Mt Dandenong was required.

It was time to go to church, the Doncaster Lutheran Church has a view to Mt Dandenong with the commercial TV towers visible.

Google Earth puts elevation as 93 meters above sea level and a distance of 19.2km



Google Earth elevation profile from Sky High Mount Dandenong observation deck to Doncaster Lutheran Church

## SECOND TEST OVER 19km – Doncaster to Mt Dandenong

After some plots and exchange of emails an idea of sighting compass bearings was calculated using Google Earth. On the morning of Tuesday 28<sup>th</sup> May I setup at the church and Peter drove to Sky High Mount Dandenong and setup his end. I had previously delivered my 24GHz TX dish to him, so all he required was power, camera and a mast and stand. Peter suggested that we make it a two way contact via Amateur Television, so I took my portable 23cm DVS-S Amateur Television Transmitter. Having a second unit saves ripping the shack apart and all the cable hassles. I also took my 23cm VSWR meter to make sure my 23cm loop antenna was tuned OK.

The weather looked dark and cold but no rain, which may have killed off any 24GHz signal. In about an hour I was all setup, having mains power was a convenient bonus and also a bit of shelter from the wind.



View from rear of 24GHz dish and 23cm beam looking to Mount Dandenong, 3 TV towers in the highlighted black rectangle Sky High Mount Dandenong observation deck just to the left of the left most TV tower by about 1km

About half hour later I was in contact with Peter, who could already see my 23cm DVB-S signal back to him. I was running 6 watts into the loop yagi beam, later dropping power down to 60 milliwatt and he still had me perfect ATV copy. This 60 milliwatt going via about 10 meters of coax into the beam – not bad, but line of sight all helps.

As Peter and Rob VK3MQ could see my TV set as my camera was focused on it, they were able to sight their 24GHz TX dish by watching my 23cm signal back to them. After a picture was obtained back from Sky High Mount Dandenong, I adjusted my RX dish just a fraction to get a completely clear picture. On occasion the picture went a bit grainy, most likely due to the imminent rain on its way. But the weather held long enough for a bit of an ATV full-duplex QSO. Peter said, *I used a pre-amp first, but your signal was so strong it was not needed. If we both have 23 cm transmit and receive we can use this to align the SHF dishes. Being able to see your receive monitor made it easy to align the 24G dish. Going further afield we will need the pre-amps.*

Encouraged by this success, Peter suggested that we try a path from Sky High Mount Dandenong to Mount Buninyong near Ballarat. This will attempted at a later date. I also have the 10GHz dishes that need some DX tests, but the RX requires an analogue satellite receiver that needs 240 volts, so an inverter, which I have, will be needed for portable work.

My 24GHz TX unit has 300mW power and the dish has 36dB gain, using an Effective Isotropic Radiated Power (EIRP) Calculator online, the 24GHz dish has an EIRP of about 1000 watts.





Camera focused on the TV



The beam just fits against the wall



DVB-S TX setup

Despite the beam near the rear of the wall, a low VSWR  
 About 9 watts of power, which was later reduced to just 60 milliwatt, with still perfect picture copy

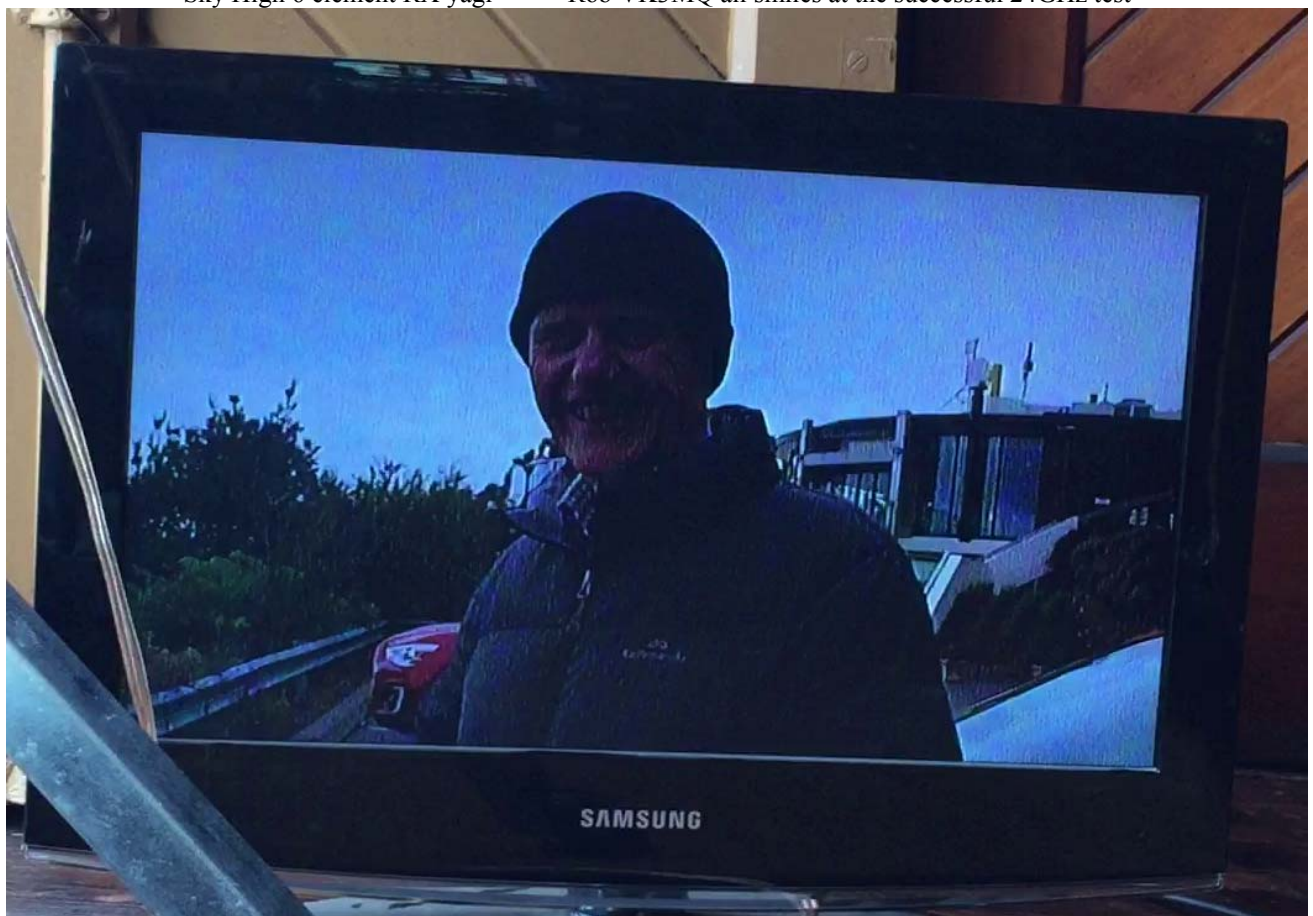




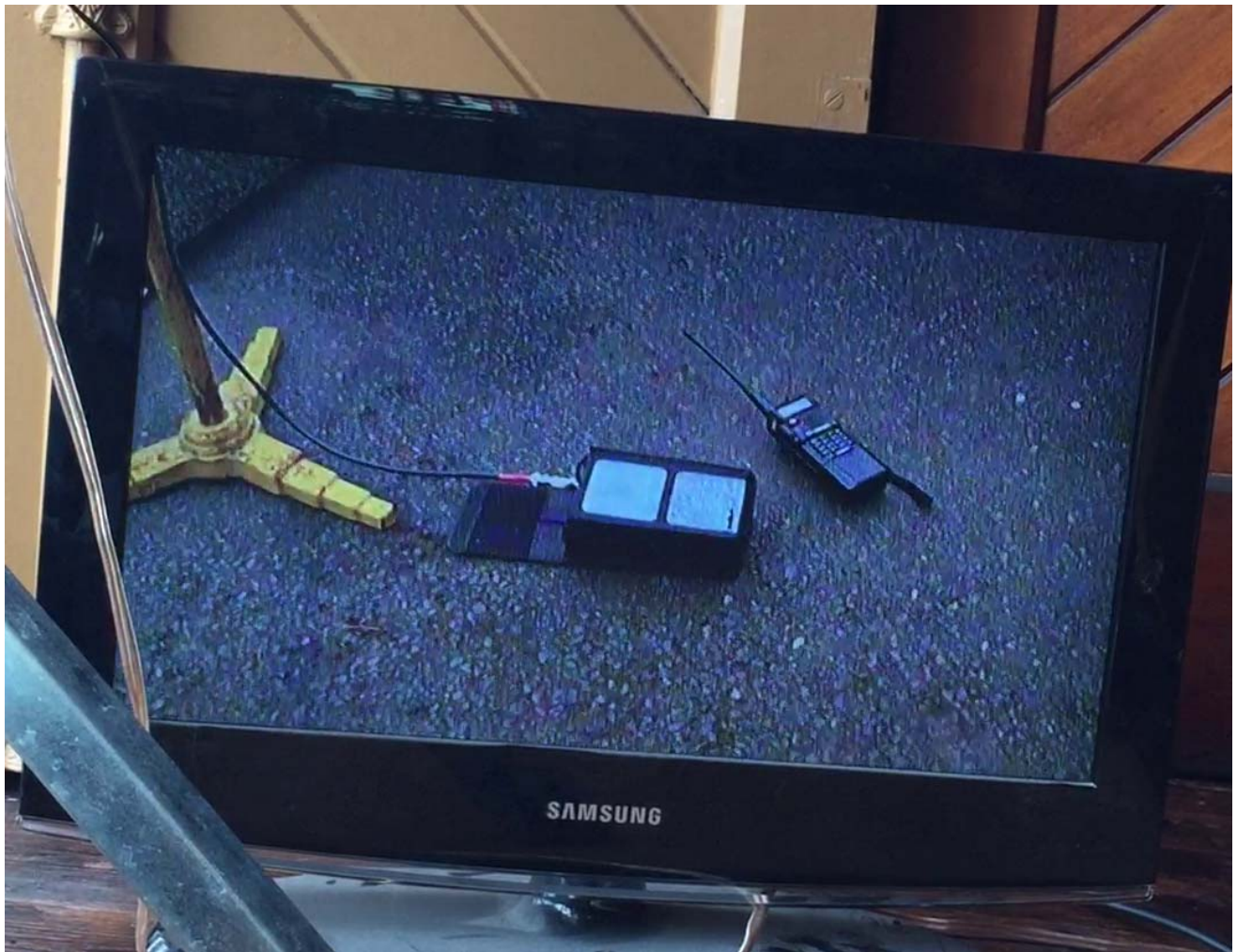


Sky High 6 element RX yagi

Rob VK3MQ all smiles at the successful 24GHz test







Peter's portable satellite receiver with display receiving the 23cm signal from Doncaster  
 This is a Digital LCD Satellite Signal Finder Meter 3.5" SATlink WS-6906 DVB-S FTA SAT AU, cost about \$83 on EBay  
 It runs off a rechargeable lithium battery, perfect for portable operation  
 Also a handheld 2 meter rig for voice liaison during setup

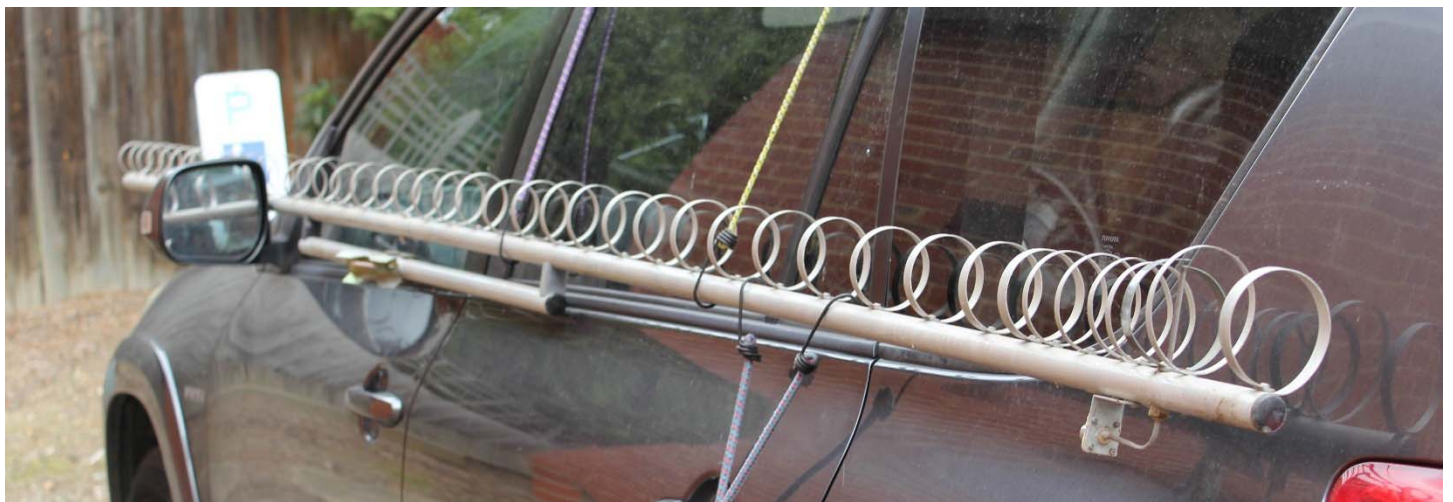
The view from Sky High Mount Dandenong observation deck from Peter's camera







The rear of the 24GHz TX dish received from Mt Dandenong



The 23cm loop yagi clipped to the car, as it's too long to fit inside during transit



← The Sat Link WS-6906 Some of the specs from their website...

View the actual channel on the screen of the meter  
 Quickly and accurately align the satellite dish  
 Transponders, Frequency, Symbol Rate, Polarity, and other settings can be modified by the user  
 Each time the meter boots up it automatically calibrates for optimum performance  
 View All the Actual FTA Satellite Channels on the Meters Screen  
 Auto Re-Calibration Due To the Unique Calibration System Built in to the Meter  
 Automatically Calculates Dish Angles and Settings Based On Your Longitude and Latitude  
 View All FTA Satellite Channels On Screen With Sound.



A week later I ordered my own Sat Link WS-6906 unit, just \$83 and was very impressed, so small but very handy. What I really like is the AV output, which you can see here is ported to my TV from the Sat Link WS-6906. So now I have a 23cm TV RX of the 23cm DVB-S transmitters of all Melbourne hams, all that's required is an antenna pointing in the right direction of their location.



Note the bit of wire for an antenna on top of the Sat Link WS-6906

A further longer distance test (Ballarat to Melbourne) will be attempted in November.

~Mick VK3CH

# Simplex 23cm Amateur Radio Television Tests

With VK3RTV repeater still yet to get back on air, some other ATV experimentation was attempted via simplex. I relocated the 23cm ATV TX beam closer to the shack to reduce coax run loss and get an extra 2 meters height. I tried a simplex contact with Peter Cossins VK3BFG who lives 11.8km away, but definitely no line of sight for RF.



With the new acquisition of the Sat Link WS-6906 unit a simplex ATV contact was possible, simply by routing the 23cm beam into the satellite receiver then into the TV set. Using Google Earth to work out where to point the beam a contact was attempted but no success.

Peter suggested that an RF preamp will be necessary as the Sat Link WS-6906 won't be as sensitive as a proper 23cm receiver.

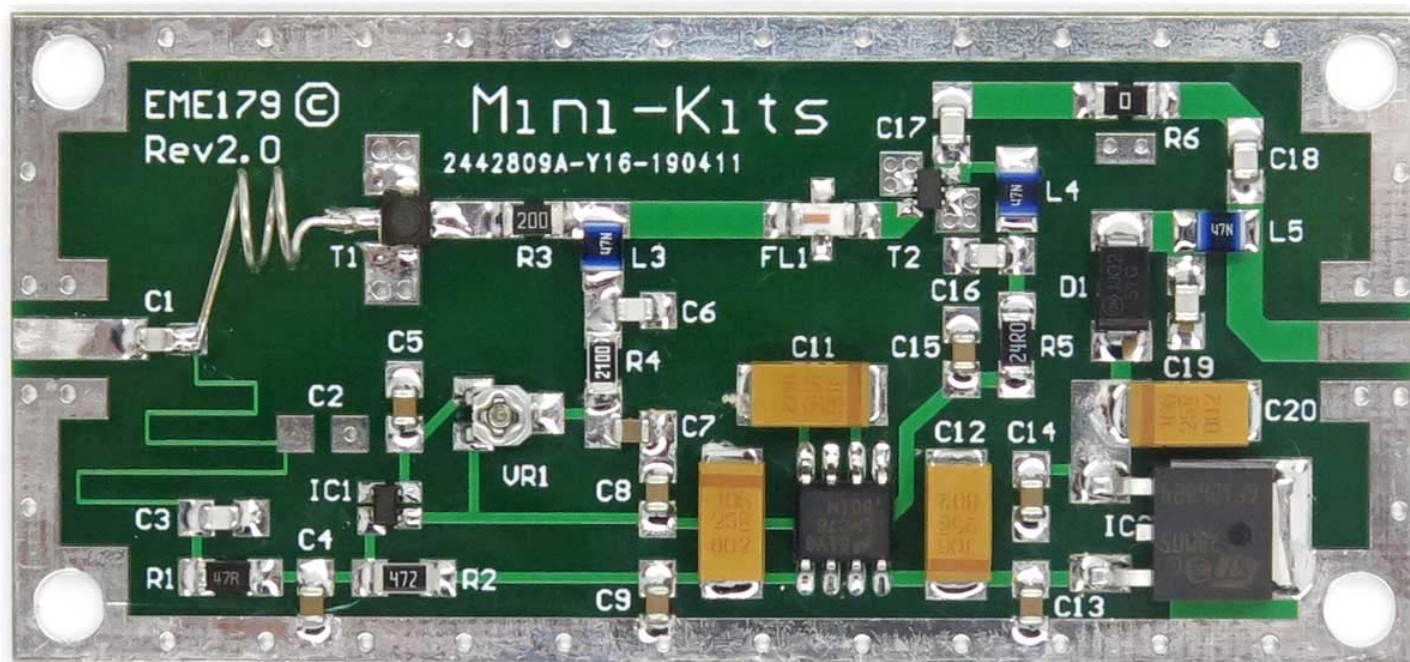
Minikits in South Australia stock a range of RF preamps and also a lot of kits for analogue ATV.

My early analogue ATV transmitters were all kits purchased from Mark of Minikits years ago.

A suitable RF preamp for 23cm was soon found on the website, the EME 179-23cm-R2 Kit <https://www.minikits.com.au/eme179>

This is version 2, just been released on May 2019.

*Image © Minikits*



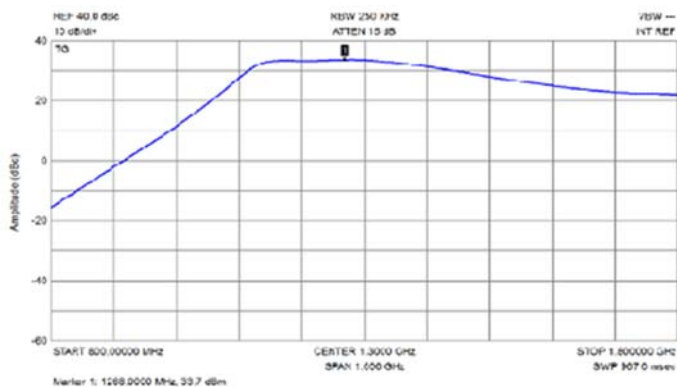
The specifications are impressive, I got mine tuned for centre of the VK 23cm ATV band, 1255 MHz

Frequency range	1180 to 1500 MHz
Bandwidth	200 MHz @ 3dB
Gain	typically 33dB gain @ 1290 MHz
Noise figure	<0.5dB (typically 0.25dB)
Power supply	+8 to 15v DC @ 105 mA
Size	PC Board 71 x 33mm

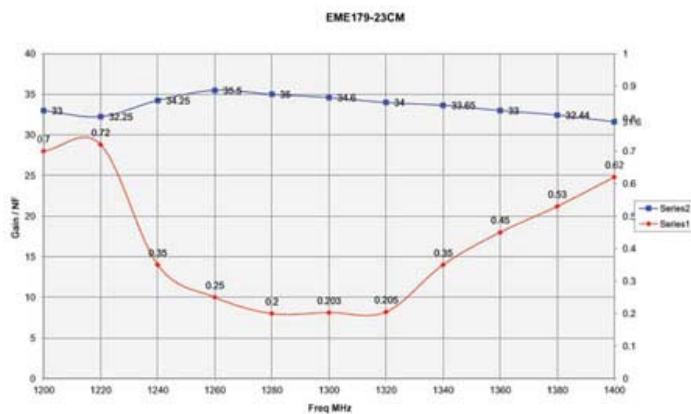
For a small fee you can order it prebuilt and tuned, instead of building the kit yourself, so I decided to be lazy and spare my eyes with SMD components and got Mark to build and tune it to a centre frequency of 1255MHz.

It arrived in the post within days, well it did, after I found where the postie had left it, at another house in my street a day before!

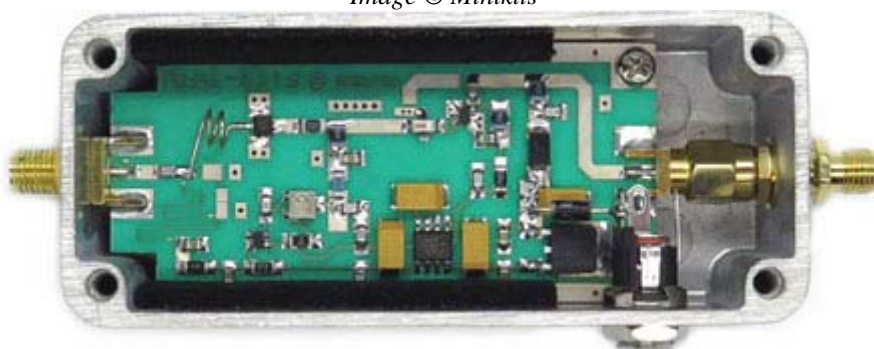




EME179-23CM Preamplifier tuned for maximum gain peak at 1186MHz for the lowest noise figure at 1290MHz  
*Image © Minikits*



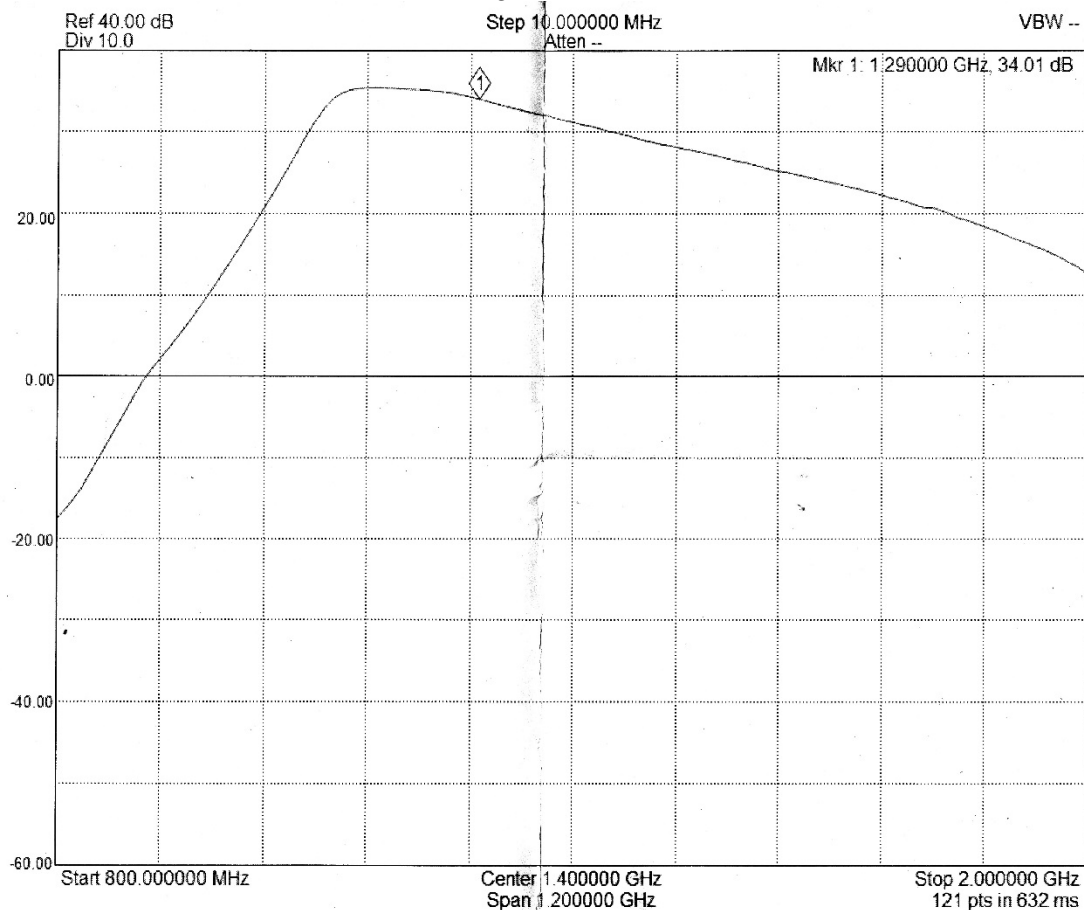
Noise Figure with a 2.5 turn 4mm inside diameter input coil.  
 Gain peak is at 1186MHz for the lowest NF of 0.2dB at 1290MHz  
*Image © Minikits*



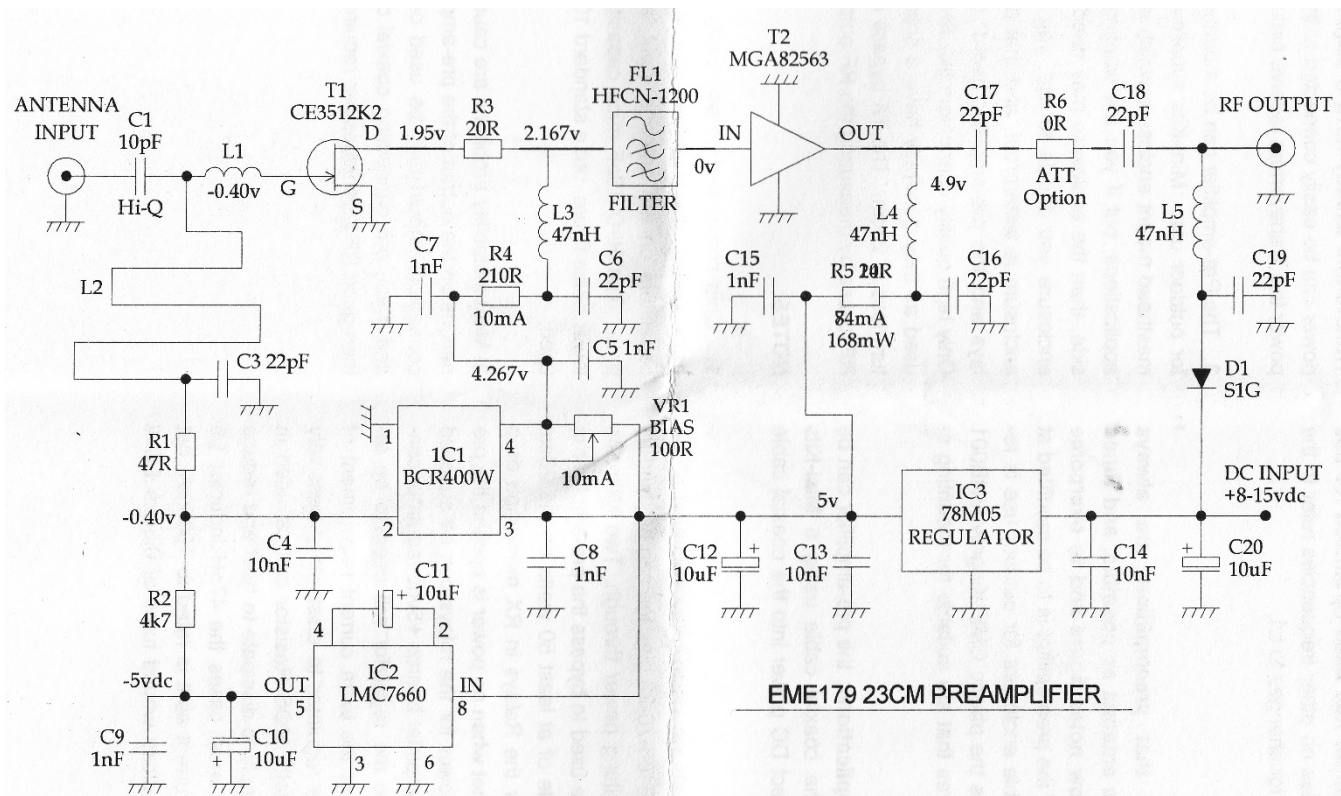
Top view of the EME179-23CM

Due to both the Sat Link WS-6906 and the EME179-23CM preamp both having 12 volts on the RF output a DC blocker was placed in-line between the two units. The only other task was to make a coax joiner from an 'F' connector to N connector which was done.

*Image © Minikits*



Gain Plot Chart of EME179-23CM preamp



Circuit Diagram  
Image © Minikits

Once the EME179-23CM preamp was in-line, it was time for a second attempt at a simplex ATV test to Peter VK3BFG. There are four “spot” frequencies on 23cm for television use.

The local oscillator reference used by the Sat Link WS-6906 Satellite Receiver in this case is 11300MHz.

To obtain the required four ‘channels’ for Digital Amateur Radio Television (DATV) the selected parameters in the chart were programmed into the Sat Link WS-6906.

### Sat Link WS-6906 Satellite Receiver Amateur Radio Television Settings

Name	Frequency	LO	LNB
1246 DVBS	1246 MHz	12546 MHz	Standard
1255 DVBS	1255 MHz	12555 MHz	Standard
1278 DVBS	1278 MHz	12578 MHz	Standard
1287 DVBS	1287 MHz	12587 MHz	Standard

### 23cm Loop Yagi Relocated June 2019 - VSWR Plot

Frequency	VSWR
1240 MHz	1: 0.05
1245 MHz	1: 0.05
1250 MHz	1: 0.05
1255 MHz	1: 0.05
1260 MHz	1: 1.1
1265 MHz	1: 1.1
1270 MHz	1: 1.1
1275 MHz	1: 1.1
1280 MHz	1: 1.1
1285 MHz	1: 1.1
1290 MHz	1: 1.1
1295 MHz	1: 1.1
1300 MHz	1: 1.1



Finally the time came around to try a test to Peter VK3BFG, which ended with no success.  
So it looks like I am in too much of a lower patch at home for any long distance ATV contacts which I always suspected.

So just for a try I decided to see how far an ATV signal would travel from home via a vertical.  
The idea was to put the ATV transmitter onto an X7000 vertical and see how far I can drive and pick up the signal.

As you can get booked for observing a screen while driving, I decided a picture with station ID with continuous Morse Code ID playing would do, I could always hear that while driving until it was lost. The idea was to have the Sat Link WS-6906 direct to an antenna then try again with the preamp inline and see what extra distance was gained.

Driving around the suburbs I have found you can increase the distance of reception using the 23cm preamp.  
I fired up the DVB-S ATV transmitter into a vertical at home and I drove until I could not get reception without the preamp.  
I had a picture with Morse ID so I could listen to the Morse, so able to drive without looking at a TV screen.

After placing the preamp inline I could drive many km further until the signal was lost.  
I no longer have a 23cm mobile whip so a 2 meter vertical whip was used as a TV aerial for the Sat Link WS-6906 Satellite Receiver.  
It depended on the terrain, but if you were attempting ATV DX then the preamp is a required tool to have.  
Having everything operating off 12 volts is best for portable operation.

~Mick VK3CH

## *HUMOROUS HISTORY*

Here are some more interesting facts about the 1500s

Those with money had plates made of pewter. Food with high acid content caused some of the lead to leach onto the food, causing lead poisoning and death. This happened most often with tomatoes, so for the next 400 years or so, tomatoes were considered poisonous.

Bread was divided according to status. Workers got the burnt bottom of the loaf, the family got the middle, and guests got the top, or "upper crust."

Lead cups were used to drink ale or whiskey. The combination would sometimes knock the imbibers out for a couple of days. Someone walking along the road would take them for dead and prepare them for burial. They were laid out on the kitchen table for a couple of days and the family would gather around and eat and drink and wait and see if they would wake up. Hence the custom of holding a "wake."

England is old and small and the local folks started running out of places to bury people. So they would dig up coffins and would take the bones to a "bone-house" and reuse the grave. When reopening these coffins, 1 out of 25 coffins were found to have scratch marks on the inside and they realized they had been burying people alive. So they would tie a string on the wrist of the corpse, lead it through the coffin and up through the ground and tie it to a bell. Someone would have to sit out in the graveyard all night (the "graveyard shift") to listen for the bell; thus, someone could be "saved by the bell" or was considered a "dead ringer."

And that's the truth. Now, whoever said that History was boring !

*Source Unknown*

Oct 13th  
Yarra Valley Hamfest  
Gary Cooper Pavilion, 16 Anzac Ave Yarra Glen

Oct 27th  
Ballarat Hamvention  
Greyhound Clubrooms, Rubicon St Redan

## Another DVB-S Amateur Radio Transmitter ~ Mick VK3CH

Way back in 2010 I built a high powered DVB-S Amateur Radio Transmitter, the third ATV transmitter I have. It was not used much and eventually was cannibalised for parts for other projects. After moving house I finally stumbled across the DVB-S modulation and transmitter boards, worth a bit of cash. The MiniMod-0 can be set for transmission as an exciter, RF output -107 dB $\mu$ V @50 $\Omega$  for 1150–1425 MHz range in 250 kHz steps. Plugging them all up and nervously applying power I was delighted to find them still working correctly. I even found a small 23cm driver RF pre-amp, along with a VU meter and audio signal driver for it. All that was needed was a suitable enclosure and final PA.

After a visit to Jaycar for the rack and screws and other hardware bits it was time to find a suitable workshop. Most of my ATV gear metalwork such as filing and drilling was done under rough circumstances with no workshop.

Here is a flashback to May 2010 when I did the metal work for my last ATV Transmitter, my table is a BBQ



Where I used to work at a group of warehouse units, across the carpark was a car club that has a fully appointed workshop with milling machines, lathes, stand drills, the lot. So I paid a visit and was made welcome to use the facilities as required, no fee. All the metalwork was completed in two visits with the electronics completed at home.

After making two previous ATV Transmitters, I just copied the other ones when it came to layout and measurements. There were some slight differences due to a different size heatsink and RF PA, but essentially similar design.

The other two transmitters have final PA modules from Germany, but this time I used the EME176 18 watt Minikits PA. These use the RA18H1213G Mitsubishi RA series module.

Frequency Range: 1240 to 1300MHz  
Input Power: +16dBm (40mW) for +43dBm output  
Output Power: +42.5dBm @ 1dB comp (18 Watts) RA18H1213G  
2nd Harmonic: -35dBc G suffix  
Frequency Range: 1240 to 1300MHz  
Gain: 23dB (Typically 27.5dB @ 1270MHz)\

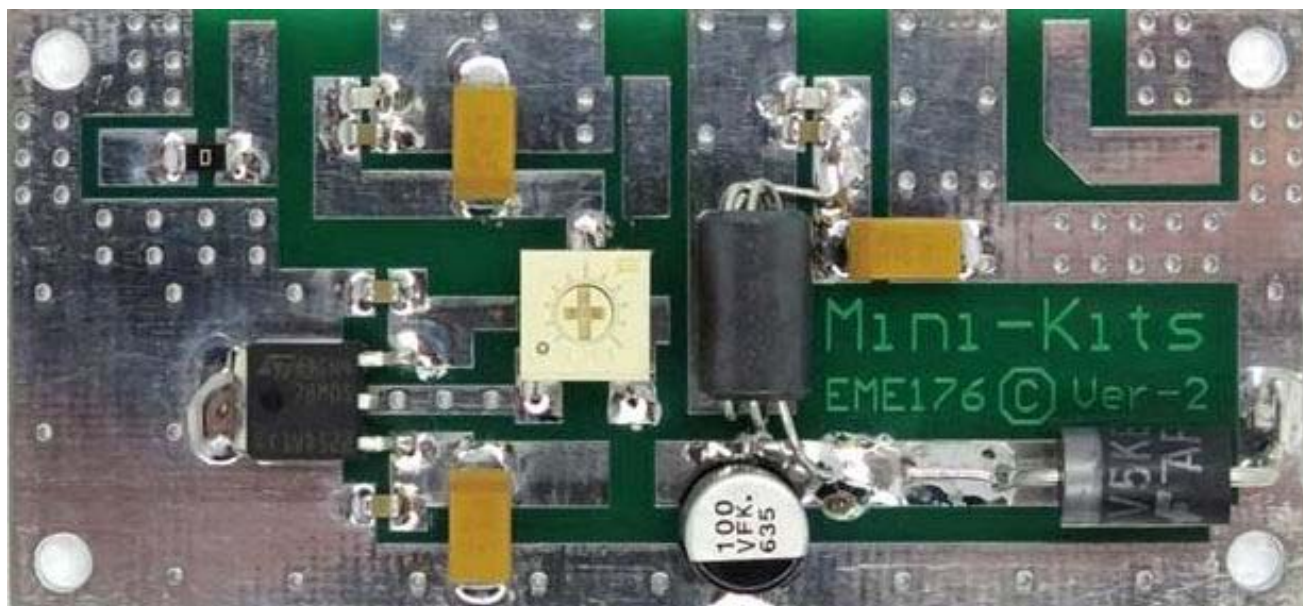


Image © Minikits



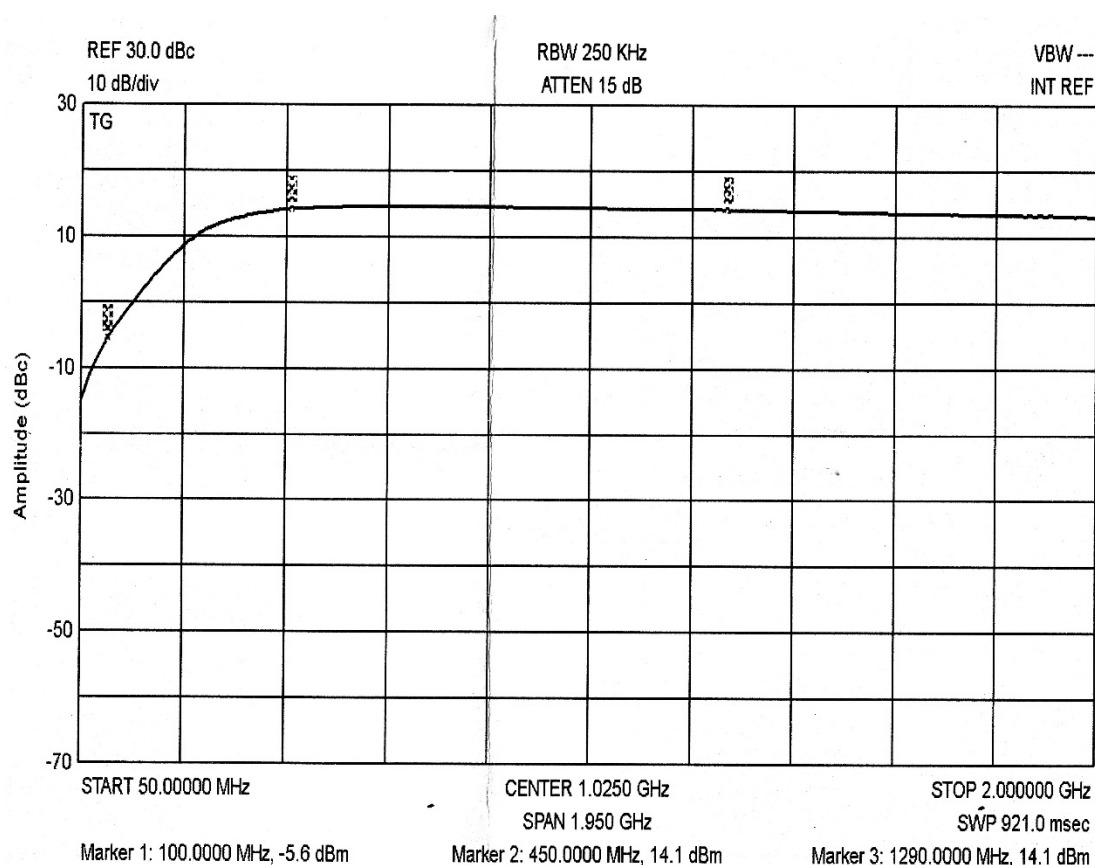
## PHA-1 RF Preamplifier

Output from the SR-System modulator board is not enough to get full drive out of the PA module, so RF is boosted with an RF preamplifier, PHA-1, Minikits also sell.

There are options to install attenuation resistor pads on the board.

I use external RF attenuators as it is hard to know how much attenuation is required until the transmitter is built and under test. The PHA-1 amplifier is a simple wideband design which is suitable as a driver amplifier for complex RF waveforms, or as a low noise high dynamic range gain block in a receiver. A PHA-1 MMIC, (Monolithic Microwave Integrated Circuit) is used, and has a high OpIP3, and produces up to +22dBm output from 70MHz to 3GHz.

Specifications	
Frequency Range:	70MHz to 2GHz, and 300MHz to 3GHz versions available
Gain Typically:	17dB @ 50MHz, 15.7dB @ 800MHz, 13.5dB @ 2GHz, 11.8dB @ 3GHz
Noise Figure:	1.7dB @ 50MHz, 1.9dB @ 1GHz, 2.2dB @ 2GHz
OpIP3:	+41dBm @ 1GHz with ICC 100mA
Output Power:	+22dBm +/- 1dB from 50MHz to 3GHz +4vdc @ 90mA )
Operating Voltage:	+ 7 to 15vdc ( +12vdc @ 100mA Recommended )



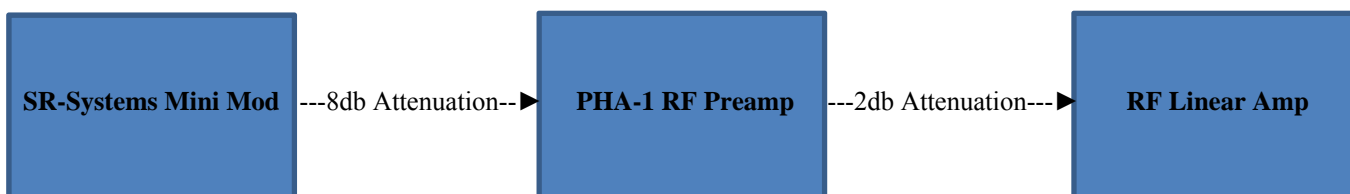
On my first test I had no attenuation between the PHA-1 and the final PA.

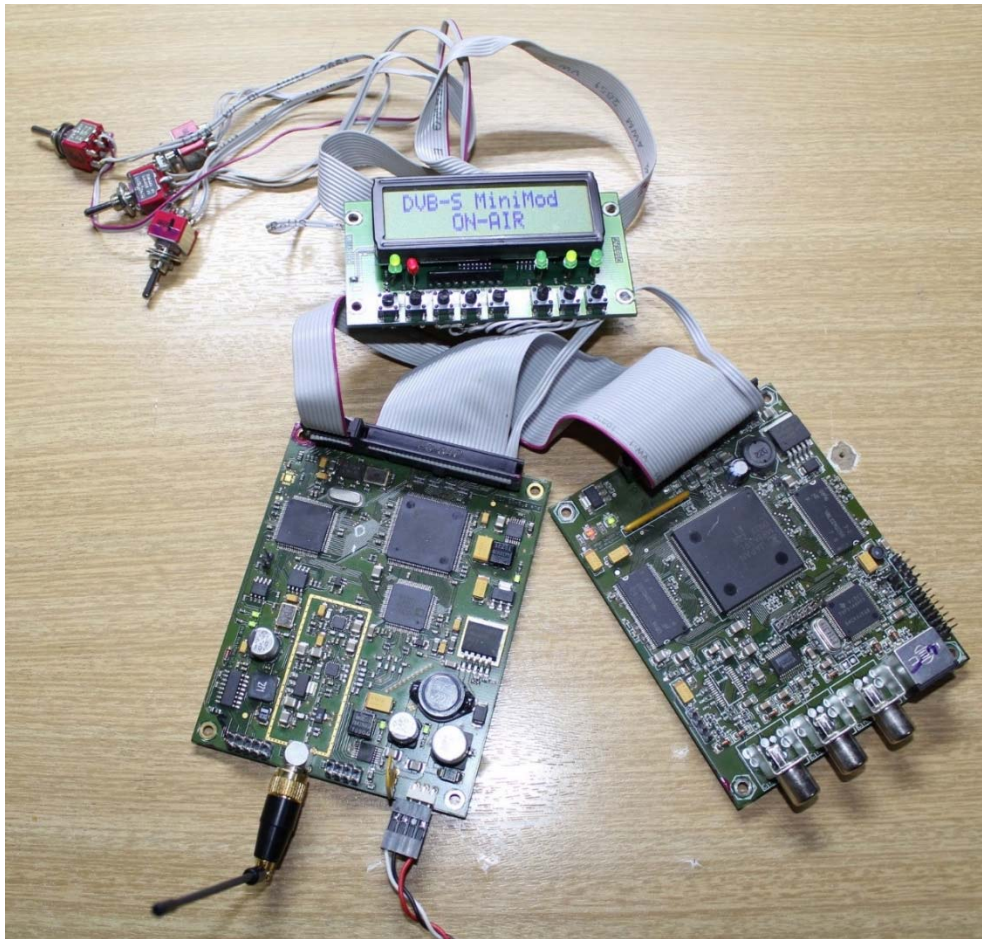
Lots of output was obtained, but it was “dirty” as too much drive on the higher levels.

On 23cm you may get away with it, but it is better to have the narrowest clean signal possible as a matter of good operation.

The final transmitter ended up with the following attenuation between RF stages.

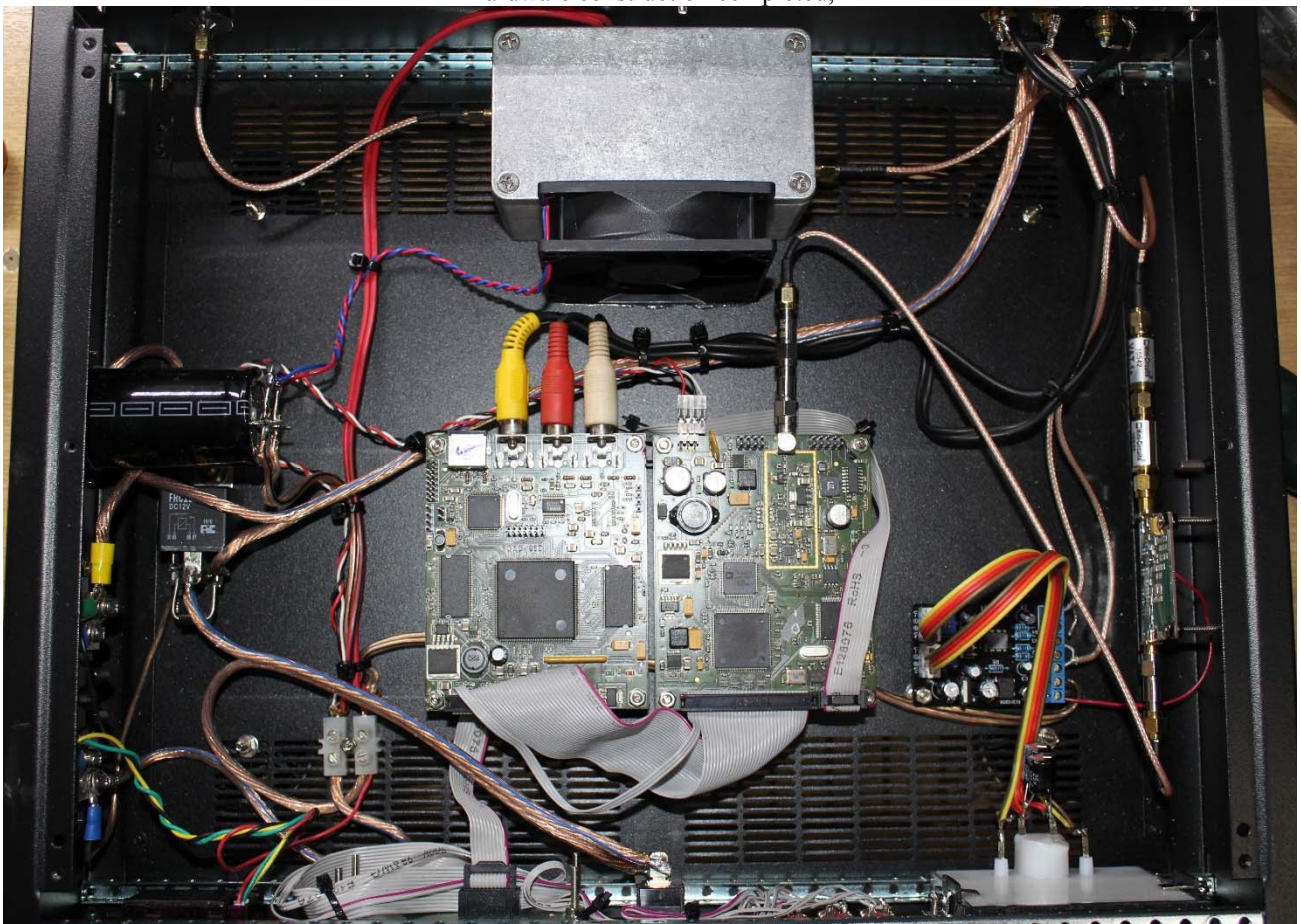
### FINAL RF BLOCK DIAGRAM





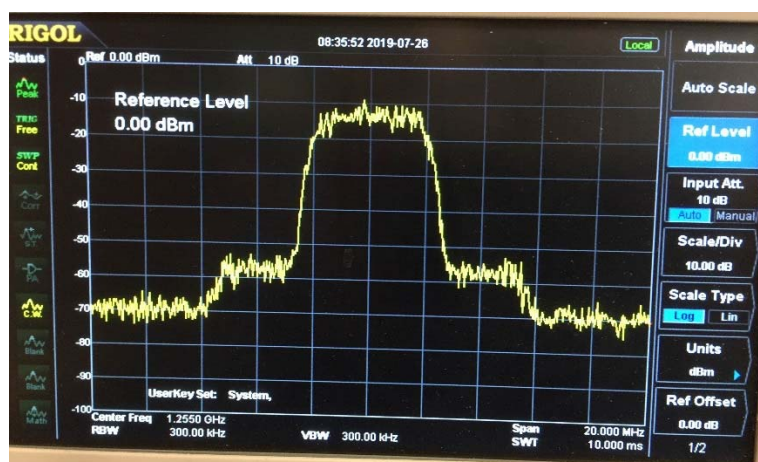
The SR-Systems DVB-S Boards on the table under test

Hardware construction completed,



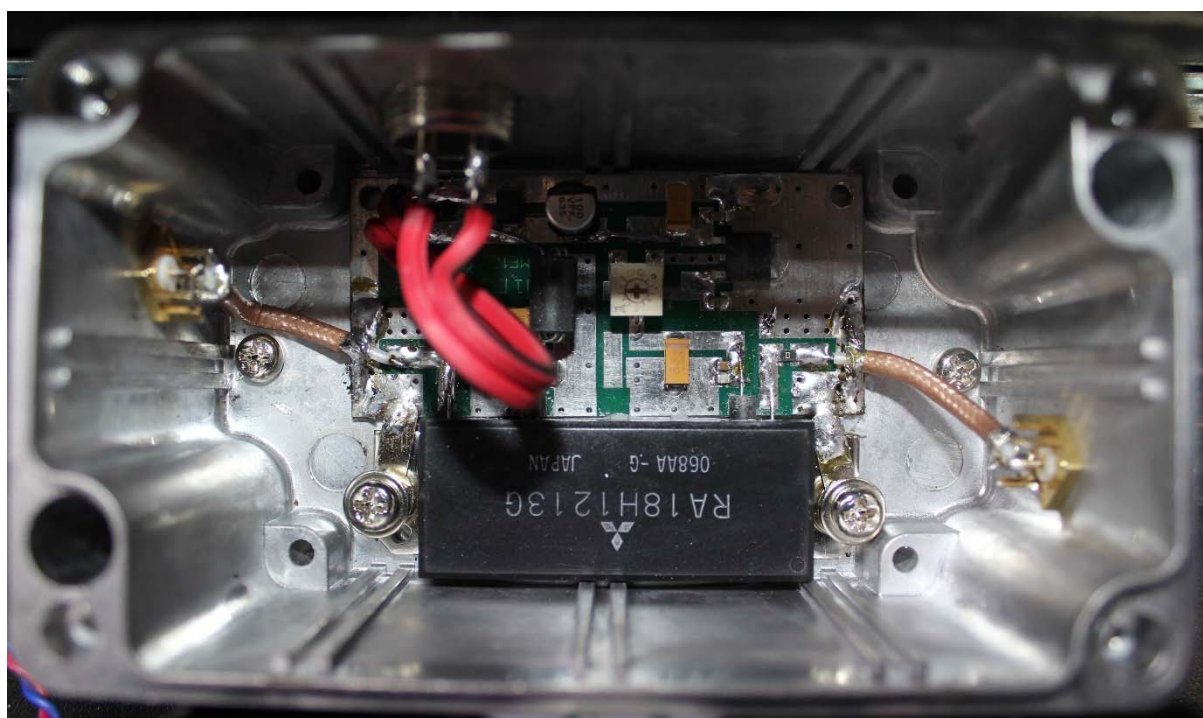


Audio and Video are sent to the IP Transport Stream Multiplexer card which is then sent to the MiniMod Transmitter Exciter card. Audio is also sent to the VU Meter driver amplifier board which then drives the VU Meter. Output from the MiniMod Transmitter Exciter is sent to an RF driver PH-3 amplifier, via suitable attenuators into the final RA18H1213G Mitsubishi RA series module. DC polarity protection is via a relay that only picks up when polarity is correct, allowing the top relay contact to switch through the 13.8 volts to the rest of the unit. Current display is via a digital display current meter that senses the total current draw in the DC input negative line. RF attenuation is necessary to have correct drive levels to the boosting and final PA – or risk destroying them, an expensive trick. Setting the correct levels was done with measuring equipment at Peter Cossins QTH. Peter has setup the correct levels on all my DVB-S ATV TX units to ensure the output signal is clean and not overdriven. Only a spectrum analyser can tell you this accurately.



Testing the unit on Peter Cossins spectrum analyser gave a very clean output. All worked fine, until up to the final PA. But no power was coming out of the PA, it looks like I tightened the module too tight and cracked the ceramic substrate inside. Also the SR Systems boards would not boot with power to the PA, it appears that the PA needs to be in a metal box to shield the RF. This was strange as the PA was not even giving any output. Other DVB-S transmitters I have made did not require the PA to be shielded. Time to correct these problems.

Another trip to Jaycar, I think they are getting to know me. This time a large thick diecast metal box was used to house the final PA. Hopefully it will dissipate the required amount of heat. A computer fan will be used to help it along, more room is available in the enclosure, compared to the previous heatsink. While drilling holes just big enough to pass cables through might be good enough to shield the RF, Peter Cossins recommended using proper grounded connections for all wiring, so panel mount SMA connectors and a metal socket for DC were used. To allow flat mounting of the box, a thread die was used to allow internal mounting screws to install the PA module and circuit board to the diecast metal box inside floor. The PA module and circuit board only just fitted into the box without forcing anything. With the removal of the heatsink the DC protection relay and some wiring were relocated.



A second test of the unit at Peter Cossins shack had all working, but the RF power was way down. The quiescent current draw of the PA module was 2.4 amps, much like the other two I have built.

After testing 8db of loss was occurring within the PA itself, most likely due to the way the thin coax was terminated onto the circuit board. Peter had some better quality Teflon coax, so he gave me some of that. At least it was working correctly, with a clean output.

Before replacing the thin coax power output on full drive (level 15) from the SR-Systems board was just 2 watts. It should have been near 12 watt as an average.

### PA OUTPUT CHART – 3<sup>rd</sup> DVB-S ATV Transmitter - 2019

A chart of the output power levels was done to see how the PA performed as each DVB-S ATV Transmitter I have built has slight differences in performance and power levels.

A before and after of changing the internal coax in the box, power output shown in Watts.

Maximum current draw is 7.1 amps.

The improvements are very evident, even with the required attenuation.

Sometimes coaxial wiring and terminations at 23cm can be critical, having accurate measuring gear helps.

The gain on 1246MHz is not much, but all my activity will be on 1255MHz.

Power Level	1246MHz Original	1246MHz New Coax	1255MHz Original	1255MHz New Coax
1	0.02	0.04	0.05	0.2
2	0.04	0.1	0.15	0.5
3	0.07	0.2	0.25	1.0
4	0.12	0.3	0.45	1.7
5	0.18	0.45	0.65	2.5
6	0.25	0.61	0.9	3.4
7	0.3	0.85	1.2	4.0
8	0.4	1.1	1.8	5.0
9	0.5	1.4	2.0	5.5
10	0.6	1.7	2.2	6.0
11	0.8	1.9	2.6	6.5
12	0.9	2.0	3.2	7.0
13	1.1	2.7	3.3	7.5
14	1.3	3.1	3.5	8.0
15	1.4	3.5	4.0	8.5

These measurements done with the lid on the box, as with no lid, minor differences were noted.

The PA module gets hot on high power, as in, too hot to touch the shield box.

The completed 3<sup>rd</sup> ATV Transmitter



So now I have three DVB-S ATV Transmitters, the main shack unit stays unaltered, with two spares for portable use. Not sure when the third unit will get used. I could always sell it one day.

Now the wait until VK3RTV is back on air.

~Mick VK3CH



## --- FOUND ONLINE ---

Some may find these useful [https://www.dxzone.com/catalog/Software/Antenna\\_analysis/](https://www.dxzone.com/catalog/Software/Antenna_analysis/)

This appears to be almost the most advanced tuning system for small transmitting loop antennas, it handles steppers and regular DC motor adjustment to Tuning Capacitors with auto adjustment to reduce SWR continuously without intervention from the operator. <http://kk5jy.net/AutoCap-v1/> to the space or rules limited operator, this may be the solution for compact antennas on HF.

## ACMA proposed changes to licence conditions

Author: Peter Clee - VK8ZZ – WIA Website & WIA News

The Australian Communications and Media Authority (ACMA) has conducted a review of licence conditions that apply to amateur radio operators with Foundation, Standard and Advanced level qualifications.

The amateur service is a longstanding user of the radiofrequency spectrum, with a range of bands made available for qualified amateurs. It is designed primarily to facilitate hobby radiocommunications and technical experimentation.

The ACMA supports the amateur service through planning arrangements which recognise the desires of amateur radio operators to access frequency bands, while balancing other demands for spectrum.

In the Draft five-year spectrum outlook 2019–23 (draft FYSO), the ACMA indicated it would commence consultation on potential changes to amateur licensing conditions in Q4 2018–19.

Our review considered various requests for changes to licence conditions in submissions made by amateur peak bodies—the Wireless Institute of Australia (WIA) and the Radio Amateur Society of Australia (RASA).

The ACMA is also taking the opportunity during this process to consult on our proposals to remove amateur advanced licensees' access to the 3575–3600 MHz band within areas reallocated for spectrum licensing.

The purpose of these changes is to prevent cancellation of advanced amateur licences that would otherwise occur as a result of the reallocation of the 3575–3700 MHz band (the 3.6 GHz band) to spectrum licensees.

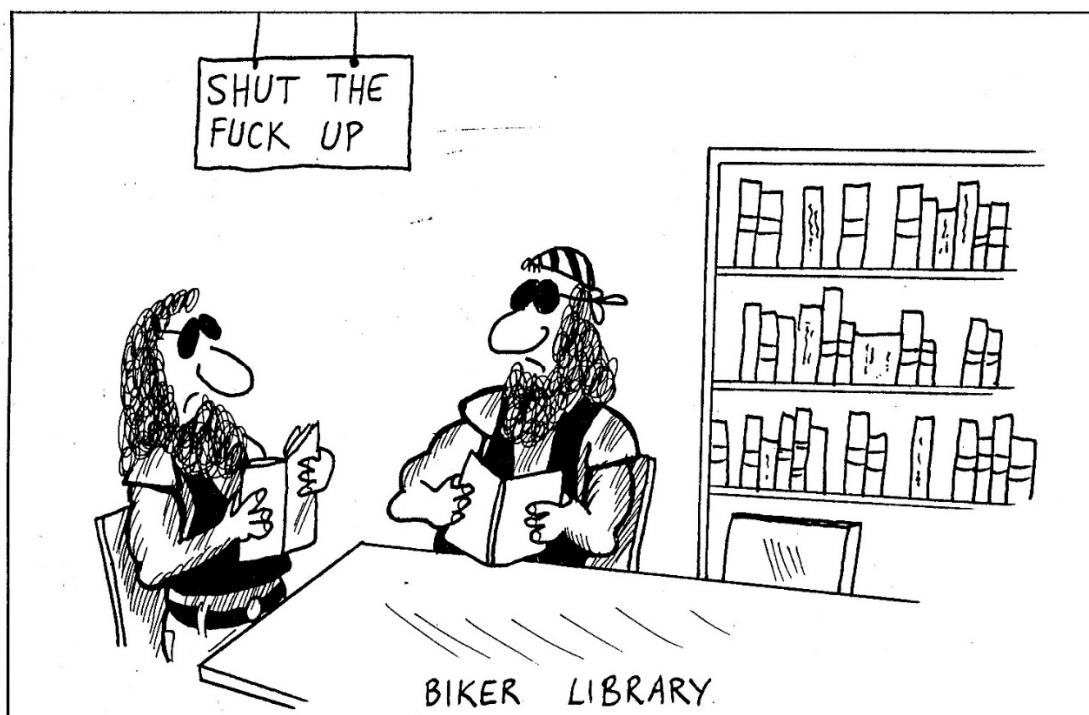
This paper sets out our proposals for public consideration.

We are seeking stakeholder views on the following:

- the removal of amateur advanced licensees' access to the 3575–3600 MHz band within specified areas
- changes that progress various requests of the amateur community, that will account for technological changes, reduce restrictions and increase flexibility for licensees
- changes that respond to requests by the amateur community for the medium term, that will increase flexibility for licensees
- additional proposals for change that we have identified for the medium term to longer term aimed at reducing the overall regulatory burden of amateur licensing arrangements.

The ACMA article can be viewed by copying the following link into your browser

<https://www.acma.gov.au/theACMA/proposed-changes-to-amateur-licence-conditions>



# Driven to Distraction...

This morning on the Hume Highway, I looked over to my left and there was a woman in a brand new BMW doing 125 kmh with her face up next to her rear view mirror putting on her eyeliner.

I looked away for a couple seconds and when I looked back she was halfway over in my lane, still working on that makeup.

As a man, I don't scare easily. But she scared me so much; I dropped my electric shaver, which knocked the donut out of my other hand.

In all the confusion of trying to straighten out the car using my knees against the steering wheel, it knocked my cell phone away from my ear, which fell into the coffee between my legs, splashed and burned Big Jim and the Twins, ruined the damn phone, soaked my trousers and disconnected an important call.

F\*\*\*ing women drivers!

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## TECH SUPPORT

Dear Tech Support:

Last year I upgraded from Girlfriend 7.0 to Wife 1.0. I soon noticed that the new program began unexpected child processing that took up a lot of space and valuable resources.

In addition, Wife 1.0 installed itself into all other programs and now monitors all other system activity. Applications such as Poker Night 10.3, Football 5.0, Hunting and Fishing 7.5, and Racing 3.6.

I can't seem to keep Wife 1.0 in the background while attempting to run my favourite applications. I'm thinking about going back to Girlfriend 7.0, but the uninstall doesn't work on Wife 1.0. Please help!

Thanks, Troubled User

Dear Troubled User:

This is a very common problem that men complain about.

Many people upgrade from Girlfriend 7.0 to Wife 1.0, thinking that it is just a Utilities and Entertainment program. Wife 1.0 is an OPERATING SYSTEM and is designed by its Creator to run EVERYTHING!!! It is also impossible to delete Wife 1.0 and to return to Girlfriend 7.0. It is impossible to uninstall, or purge the program files from the system once installed.

You cannot go back to Girlfriend 7.0 because Wife 1.0 is designed to not allow this. Look in your Wife 1.0 manual under Warnings-Alimony/Child Support. I recommend that you keep Wife 1.0 and work on improving the situation. I suggest installing the background application "Yes Dear" to alleviate software augmentation.

The best course of action is to enter the command C:\APOLOGIZE! Because ultimately you will have to give the APOLOGIZE command before the system will return to normal anyway.

Wife 1.0 is a great program, but it tends to be very high maintenance. Wife 1.0 comes with several support programs, such as Clean and Sweep 3.0, Cook It 1.5, and Do Bills 4.2. However, be very careful how you use these programs. Improper use will cause the system to launch the program Nag Nag 9.5.

Once this happens, the only way to improve the performance of Wife 1.0 is to purchase additional software. I recommend Flowers 2.1 and Diamonds 5.0!

WARNING!!! DO NOT, under any circumstances, install Secretary with Short Skirt 3.3.

This application is not supported by Wife 1.0 and will cause irreversible damage to the operating system!

Best of luck, Tech Support



# NEVARC Nets



## 40M Net

Monday, Wednesday and Fridays  
10am Local time (East coast)

7.095 MHz LSB

Approximately + or - QRM

Hosted by Ron VK3 AHR

## 80M Net

Wednesday 20:30 Local time

3.622 MHz LSB

Hosted by Ron VK3 AHR

Using the club call VK3ANE

## 2M Nets

Monday at 2000 local time on  
VK3RWO repeater

146.975 MHz

President, VK2VU, Gary  
Vice President, Tom VK3NXT  
Secretary, VK2FKLR, Kathleen  
Treasurer, Amy



## NEVARC CLUB PROFILE

### History

The North East Victoria Amateur Radio Club (NEVARC) formed in 2014.  
As of the 7th August 2014, Incorporated, Registered Incorporation number A0061589C.  
NEVARC is an affiliated club of the Wireless Institute of Australia.

### Meetings

Meetings details are on the club website, the Second Sunday of every month, check for latest scheduled details.  
Meetings held at the Belviour Guides Hall, 6 Silva Drive West Wodonga.  
Meetings commence with a BBQ (with a donation tin for meat) at 12pm with meeting afterwards.  
Members are encouraged to turn up a little earlier for clubroom maintenance.  
Call in Via VK3RWO, 146.975, 123 Hz tone.

### VK3ANE NETS

#### HF

7.095 MHz Monday, Wednesday, Friday - 10am Local time  
3.622 MHz Wednesday - 8.30pm Local time

#### VHF

VK3RWO Repeater 146.975 MHz – Monday - 8pm Local time  
All nets are hosted by Ron Hanel VK3AHR using the club callsign VK3ANE

### Benefits

To provide the opportunity for Amateur Radio Operators and Short Wave Listeners to enhance their hobby through interaction with other Amateur Radio Operators and Short Wave Listeners. Free technology and related presentations, sponsored construction activities, discounted (and sometimes free) equipment, network of likeminded radio and electronics enthusiasts. Excellent club facilities and environment, ample car parking.

**Website:** [www.nevarc.org.au](http://www.nevarc.org.au)

**Postal:**

**NEVARC Secretary**  
**PO Box 69**  
**Wahgunyah Vic 3683**

**Facebook:** [www.facebook.com/nevicARC/](https://www.facebook.com/nevicARC/)

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All editors' comments and other opinions in submitted articles may not always represent the opinions of the committee or the members of NEVARC, but published in spirit, to promote interest and active discussion on club activities and the promotion of Amateur Radio. Contributions to NEVARC News are always welcome from members.

Email attachments of Word™, Plain Text, Excel™, PDF™ and JPG are all acceptable.

You can post material to the Post Office Box address at the top of this page, or email [magazine@nevarc.org.au](mailto:magazine@nevarc.org.au)

Please include a stamped self-addressed envelope if you require your submission notes returned.

Email attachments not to exceed 5 Mb in file size. If you have more than 5 Mb, then send it split, in several emails to us.

Attachments of (or thought to be) executable code or virulently affected emails will not be opened.

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While we strive to be accurate, no responsibility taken for errors, omissions, or other perceived deficiencies, in respect of information contained in technical or other articles.

Any dates, times and locations given for upcoming events please check with a reliable source closer to the event.

This is particularly true for pre-planned outdoor activities affected by adverse weather etc.

The club website <http://nevarc.org.au/> has current information on planned events and scheduled meeting dates.

You can get the WIA News sent to your inbox each week by simply clicking a link and entering your email address found at [www.wia.org.au](http://www.wia.org.au) The links for either text email or MP3 voice files are there as well as Podcasts and Twitter. This WIA service is FREE.